

Title (en)
STIRRER

Title (de)
RÜHRER

Title (fr)
AGITATEUR

Publication
EP 2873453 A4 20160323 (EN)

Application
EP 12880931 A 20120713

Priority
JP 2012068028 W 20120713

Abstract (en)

[origin: EP2873453A1] The present invention is designed to provide a stirrer capable of finely dispersing or emulsifying well. A stirrer in which: the stirrer is provided with a rotating rotor (2) equipped with multiple blades (12) and a screen (9) that is placed around the rotor (2) and has multiple slits (8); the blade (12) and the slits (8) are provided at least with matching regions that are at the same position in the axial direction of the rotor rotation axis (13); and the fluid being processed is discharged outward from inside the screen (9) as an intermittent jet flow through the slits (8) as a result of the rotation of the rotor (2). The stirrer is characterized in that when the maximum external diameter of the rotor (2) in the matching region is (D) (m), the rotation frequency of the rotor (2) is (N) (times/s), the number (12) is (X) and the number of slits (8) is (Y), the circumferential velocity (V) (m/s) of the rotor (2) rotation is represented by equation (1) and the frequency (Z) (kHz) of the intermittent jet flow is represented by equation (2) ($V = (D) \times (\text{Å}) \times (N)(1)(Z) = (N) \times (X) \times (Y)/1000(2)$) and the circumferential velocity (V) is set to be 23 m/s < (V) < 37 m/s and the frequency (Z) is set to be 35 < (2).

IPC 8 full level

B01F 7/00 (2006.01); **B01F 3/08** (2006.01); **B01F 5/06** (2006.01); **B01F 7/16** (2006.01)

CPC (source: EP KR US)

B01F 23/41 (2022.01 - US); **B01F 25/441** (2022.01 - US); **B01F 25/50** (2022.01 - EP KR US); **B01F 27/1142** (2022.01 - EP KR US);
B01F 27/1143 (2022.01 - EP KR US); **B01F 27/192** (2022.01 - EP US); **B01F 27/808** (2022.01 - EP US); **B01F 27/8111** (2022.01 - EP US);
B01F 27/84 (2022.01 - EP US); **B01F 27/86** (2022.01 - US); **B01F 2215/0409** (2013.01 - EP US); **B01F 2215/0454** (2013.01 - EP US);
B01F 2215/0481 (2013.01 - EP US)

Citation (search report)

- [XA] WO 2012023609 A1 20120223 - MEIJI CO LTD [JP], et al
- See references of WO 2014010094A1

Cited by

EP3318543A4; US10287232B2

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 2873453 A1 20150520; EP 2873453 A4 20160323; EP 2873453 B1 20171025; CN 104411392 A 20150311; CN 104411392 B 20170623;
JP 5147091 B1 20130220; JP WO2014010094 A1 20160620; KR 101954110 B1 20190305; KR 20150028771 A 20150316;
US 2015321154 A1 20151112; US 9962666 B2 20180508; WO 2014010094 A1 20140116

DOCDB simple family (application)

EP 12880931 A 20120713; CN 201280074434 A 20120713; JP 2012068028 W 20120713; JP 2012538118 A 20120713;
KR 20147033875 A 20120713; US 201214409977 A 20120713